

CLAIMS

1. A sewing machine including: a reciprocally-driven needle bar; a sewing needle fixed to a distal end of the needle bar; a rotary member
5 provided concentrically with the needle bar for rotation about an axis of the needle bar; a rotary holder member having an elongated sewn material wound thereon; and a guide for guiding the sewn material, paid out from the rotary holder member, to a sewing position of the sewing needle, the guide being provided for rotation together with the rotary member, said
10 sewing machine sewing the sewn material onto an object of sewing while adjusting an orientation of the guide by controlling the rotation of the rotary member, said sewing machine comprising:

a tension detector that detects tension acting on the sewn material paid out from said rotary holder member; and

15 a drive device that drives said rotary holder member to rotate, driving operation of the drive device being controlled on the basis of detection, by said tension detector, of the tension.

2. A sewing machine as claimed in claim 1 wherein said tension detector
20 includes a displacement member mechanically displaceable in accordance with the tension acting on the sewn material, and a detector for detecting displacement of said displacement member.

3. A sewing machine as claimed in claim 1 which further comprises a
25 deflection member for changing a direction of the sewn material paid out from said rotary holder member, said deflection member is mechanically displaceable in accordance with the tension acting on the sewn material, and

wherein said tension detector includes a detector for detecting
30 displacement of said deflection member.

4. A sewing machine as claimed in claim 2 wherein said detector is a limit switch that is turned on or off in accordance with a displaced position of said displacement member or said deflection member.

5

5. A sewing machine as claimed in claim 1 wherein said drive device is activated when the tension acts on the sewn material, to drive said rotary holder member to rotate in a direction to pay out the sewn material.

10

6. A sewing machine as claimed in claim 1 wherein said rotary holder member is a bobbin of a relatively large size positioned in a space above said needle bar.

15

7. A sewing machine as claimed in claim 1 wherein the sewn material is a string material.